

# Claims

- [c1] 1. A method of fabricating an organic light emitting diode device, comprising:
  - (a) providing a substrate having an organic light emitting diode unit thereon;
  - (b) forming a passivation layer on the substrate to cover the organic light emitting diode unit; and
  - (c) providing an ion beam to perform surface treatment on the passivation layer.
- [c2] 2. The method according to Claim 1, wherein the passivation layer is formed of either silicon nitride or silicon oxide.
- [c3] 3. The method according to Claim 1, wherein the ion beam is provided by ion implantation.
- [c4] 4. The method according to Claim 1, wherein the ion beam is provided by sputtering.
- [c5] 5. The method according to Claim 1, further comprising the step after step (c):
  - (d)forming a plastic layer on the passivation layer.
- [c6] 6. The method according to Claim 5, further comprising

repeating the steps (b) to (d) at least once.

- [c7] 7. The method according to Claim 5, wherein the plastic layer is made of ultra high molecular weight polyethylene or PMMA.
- [c8] 8. A method of forming a solid passivation layer to protect an electronic device formed on a substrate, comprising:
  - (a) forming a passivation layer to cover the electronic device; and
  - (b) providing an ion beam to perform surface treatment on the passivation layer.
- [c9] 9. The method according to Claim 8, wherein the passivation layer is made of silicon nitride or silicon oxide.
- [c10] 10. The method according to Claim 8, wherein the ion beam is provided by ion implantation.
- [c11] 11. The method according to Claim 8, wherein the ion beam is provided by sputtering.
- [c12] 12. The method according to Claim 8, further comprising the following step after the step (b):
  - (c) forming a plastic layer on the passivation layer.
- [c13] 13. The method according to Claim 12, further comprising the step of repeating steps (a) to (c) at least once.

[c14] 14. The method according to Claim 12, wherein the plastic layer is made of ultra high molecular polyethylene or PMMA.